

Table 5

Summary of Maize Transformation Experiments

Exp. #	Culture Bombarded	# of Filters Bombarded	# of Independent bar Transformants Recovered	# with Intact bar Expression Units	# with GUS Coding Sequence	# with GUS Activity	Cointegration Frequency (%)	Coexpression Frequency (%)
1	SC82	4	4	3	n.a.			
2	SC82	6	3	2	n.a.			
3	SC94	10	8	6	n.a.			
4	SC716*	8	13	8	11	3	85	23
5	SC716*	8	7	4	6	1	86	14
6	SC82*	4	19	17	13	3	68	16
TOTALS		40	54	40	30	7	77(30/39)	18(7/39)

* culture reinitiated from cryopreserved cells

n.a. not applicable; only pDPG165 DNA used or co-transformation analysis not done

Table 9

Expression Cassette	Protocol	Gene in Callus	Callus Expression	Gene in Ro Plant	Ro Plant Expression	Gene in Progeny Plant	Progeny Plant Expression
<i>uidA</i> (GUS, reporter gene)	1,2,3,4	+	+	+	+	+	+
<i>bar</i> (bialaphos resistance, selectable marker)	1,2,3,4	+	+	+	+	+	+
<i>lux</i> (luciferase reporter, gene)	2	+	+	+	+	In progress	
<i>hyg</i> (hygromycin resistance, selectable marker)	4	+	+	+	+	+	+
35S- <i>adh-aroA</i> (Glyphosate tolerance)	2	+	+	+	+	+	+
α -tubulin- <i>aroA</i> (Glyphosate tolerance)	2	+	+	+	+	In progress	
2xhis- <i>aroA</i> (Glyphosate tolerance)	2	+	-	ND	ND	In progress	
35S <i>his-aroA</i> (Glyphosate tolerance)	2	+	-	ND	ND	In progress	
<i>R,C1</i> (anthocyanin pigment synthesis)	1	+	+				
35S- <i>laB6</i> (Bt)	2	+	ND	+	ND	In progress	

Expression Cassette	Protocol	Gene in Callus	Callus Expression	Gene in Ro Plant	Ro Plant Expression	Gene in Progeny Plant	Progeny Plant Expression
35S-HD73 (Bt)	4	+	-	+	-	+	ND
35S-1800b (Bt)	2,4	+	-	+	+	+	+
2730CS-AdhVI-1800b (Bt)	2	+	ND	+	+	In progress	
35S-Adh1-1800b (Bt)	2,4	+	ND	+	In progress		
35S-MZTP-1800b (Bt)	2,4	+	In progress				
Adh1-adh1-1800b (Bt)	4	+	+	+	-	Completed	
potato <i>pinII</i> (proteinase inhibitor confers insect resistance)	2	+	+	+	ND	In progress	
tomato <i>pinII</i> (proteinase inhibitor confers insect resistance)	2	+	ND	+	ND	In progress	
35S- <i>dapA</i> (altered lysine production)	3,4	+	+	In progress			
Z27- <i>dapA</i> (altered lysine production in seed)	3,4	+	NA	ND	ND	In progress	
Z27Z10 (altered storage protein in seed)	3,4	+	NA	ND	NA	+	+
Z4Z10 (altered storage protein in seed)	3,4	+	NA	ND	NA	In progress	
Z10Z10 (altered storage protein in seed)	3,4	+	NA	ND	NA	In progress	

Expression Cassette	Protocol	Gene in Callus	Callus Expression	Gene in Ro Plant	Ro Plant Expression	Gene in Progeny Plant	Progeny Plant Expression
10Z4ENT (altered storage protein in seed)	3,4	+	NA	ND	NA	In progress	
1020P (altered storage protein in seed)	3,4	+	NA	ND	NA	In progress	
35S- <i>adh1-mtID</i> (enhanced stress resistance)	2	+	In progress				
<i>deh</i> (resistance to dalapon herbicide)	4	ND	+	In Progress			

NA indicates not applicable, e.g., gene does not express in that tissue type.

ND indicates not done, but tissue was available.

Blank space indicates experiment has not progressed to this point or was terminated before this point.

The symbol "+" indicates that expression of the gene was detected by RNA, protein, enzyme assay or biological assay.